

ADDITIONS TO THE CHECK-LIST OF THE FISHES OF NEW SOUTH WALES.

No. 2.

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The publication of the late A. R. McCulloch's "Check-list of the Fishes and Fish-like Animals of New South Wales" placed our knowledge of the ichthyology of this State on a very sound footing, and the comparatively small amount of additional information which has since come to hand can be summarised in this paper.

Dates of Publication of the Check-List.

Part One.—November 27, 1919.

Part Two.—April 11, 1921.

Part Three.—February 10, 1922.

Handbook.—May 16, 1922.

Second Edition.—July 14, 1927.

The detailed bibliographic references are as follows:—

"Check-list of the Fish and Fish-like Animals of New South Wales." Part i., *Austr. Zoologist* i., 7, 1919, pp. 217-227, pls. xvi.-xviii. Author's separates unpagged but with the plates numbered xvi.-xviii. This paper was reprinted with minor alterations and additions and issued with separates of part ii., paged 1-13, pls. i.-iii., and 1 text-figure.

"Check-list, etc." Part ii., *Austr. Zoologist* ii., 2, 1921, pp. 24-68, pls. iv.-xxiv. Author's separates paged 14-56 and issued with the revised part i. as "Check-list, etc.," parts i.-ii., 1921, pp. 1-56, pls. i.-xxiv., and 1 text-figure.

"Check-list, etc." Part iii., *Austr. Zoologist* ii., 3, 1922, pp. 86-130, pls. xxv.-xliii.

"The Fishes of New South Wales." *Austr. Zool. Handbook*, No. 1. Check-list, etc., 1922, pp. i.-xxvi. and 1-104, pls. i.-xliii., and 1 text-figure. Bound in boards.

"The Fishes and Fish-like Animals of New South Wales." Second edition with additions by Gilbert P. Whitley (of which the present paper is a continuation). Pagination as in Handbook, but with three un-numbered pages of additions following the title page. Bound in paper covers. 1927.

Only one new name was proposed in the Check-list, but, as it has been overlooked by compilers of the Zoological Record, attention is drawn to it here. This is *Platycephalus caeruleopunctatus* McCulloch (*Austr. Zoologist*, ii., 3, February 10, 1922, p. 120; Handbook, p. 94) for *P. bassensis* Stead (non. C. & V.).

Recent additions to the Check-list.

To the second edition of the Check-list, I added the following species:—*Acanthidium quadrispinosum* McCulloch, *Squatina tergocellata* McCulloch, *Aptychotrema bougainvillii* (Müller & Henle), *Uropterygius marmoratus* (Lacépède), *Aeoliscus strigatus* (Günther), *Coclorhynchus (Paramacrurus) mirus* McCulloch, *Pseudorhombus duplocellatus* Regan, *Rhadinocentrus ornatus* Regan, *Megalaspis cordyla* (Linnaeus), *Choerodon olivaceus* (De Vis), *Bleekeria vaga* McCulloch & Waite, *Histiophryne bougainvillii* (C. & V.), *Lophiomus laticeps* (Ogilby), and *Aluterus monoceros* (Linnaeus).

These species were either identified from New South Wales specimens by me

or their inclusion in the list was necessitated by records in the following papers:—
WAITE, E. R. Illustrations of and Notes on some Australian Fishes.

Rec. S. Austr. Mus., ii., 4, April 30, 1924, 479-487.

McCULLOCH, A. R. Studies in Australian Fishes. No. 8.

Rec. Austr. Mus., xv., 1, April 15, 1926, 28-39.

WHITLEY, G. P. Fishes. In the Biology of North-west Islet, Capricorn Group.

Austr. Zoologist, iv., 4, April 30, 1926, 227-236.

McCULLOCH, A. R. Report on some Fishes obtained by the F.I.S. "Endeavour." . .

Biol. Res. Endeavour, v., 4, June 8, 1926, 157-216.

NORMAN, J. R. A Report on the Flatfishes (Heterosomata). . . .

Biol. Res. Endeavour, v., 5, June 15, 1926, 219-308.

WHITLEY, G. P. A Check List of Fishes Recorded from Fijian Waters.

Journ. Pan-Pacif. Res. Inst., ii., 1, December, 1926, p. 8, appendix.

NORMAN, J. R. A Synopsis of the Rays of the Family Rhinobatidae, with a Revision of the genus *Rhinobatus*.

Proc. Zool. Soc. Lond., 1926, iv., December 30, 1926, 941-982.

WHITLEY, G. P. Studies in Ichthyology. No. 1.

Rec. Austr. Mus., xv., 5, April 6, 1927, 289-304.

Further Additions.

VI.

Family CARCHARHINIDAE.

- Sb. CARCHARHINUS MACRURUS Whaler Shark. *Carcharias macrurus* Ramsay & Ogilby, *Proc. Linn. Soc. N.S.W.* (2), ii., 1, 1877, 163 and 1024. Port Jackson.

This species has been fully described by McCulloch (*Proc. Linn. Soc. N.S.W.*, xli., 1, 1921, 457, pl. xxxvii., figs. 1-4), but in the Check-list it is wrongly called *C. brachyurus* Günther, an allied New Zealand species.

384. RHIZOPRIONODON, gen. nov.

Rhizoprion Ogilby (Mem. Q'ld. Mns., iii., January 28, 1915, p. 132) is pre-occupied by *Rhizoprion* Jourdain (*Comptes Rendus*, Paris, liii., 22, July-December, 1861, 959-962; *vide* Palmer, *Ind. Gen. Mamm.*, 1904, 608), a genus of mammals, so I rename it *Rhizoprionodon* with *Carcharias* (*Scoliodon*) *crenoides* Klunzinger (*Sitzb. Akad. Wiss. Wien.*, lxxx., 1, 1879, 426 (102 of reprint), pl. viii., fig. 3, teeth. Queensland) as orthotype. No. 8(A)a of the Check-list now becomes *Rhizoprionodon crenoides* (Klunzinger).

X.

Family SCYLIORHINIDAE.

385. FIGARO Whitley, *Rec. Austr. Mus.*, xvi., 4, March 28, 1928, 238. Orthotype, *Pristiurus* (*Figaro*) *boardmani* Whitley.

- 385a. FIGARO BOARDMANI Boardman's Shark. *Pristiurus* (*Figaro*) *boardmani* Whitley, *loc. cit.*, 238, pl. xviii., fig. 3. Off Montague Island. Type in Austr. Museum.

A deep-sea shark of which only the male is so far known. Length, 22 inches.

XIX.

Family RHINOBATIDAE.

- 30a. APTYCHOTREMA BANKSI (Müller & Henle).

Add to synonymy: *Rhinobatus tuberculatus* Macleay (*Proc. Linn. Soc. N.S.W.*, vii., 1882, 12. Port Jackson), *nomen nudum*.

XXII.

Family DASYATIDAE.

- 39a. UROLOPHUS SUFFLAVUS sp. nov. Yellow-backed Stingaree.

Urolophus sufflavus is proposed as a new name for "*Urolophus aurantiacus*?" McCulloch (*Biol. Res. Endeavour*, iv., 4, October 31, 1916, 171 and 172, pl. xlix.) which is specifically separable from the Japanese *U. aurantiacus* Müller & Henle (*Plagiost.*, iii., 1841, 173, pl. lvi.).

Type locality: Off the coast of New South Wales, between Port Hacking and Wollongong, trawled in 40-70 fathoms.

XXXIV.

Family SALMONIDAE.

- 60c. SALMO GILBERTI. Kern River Trout or Gilbert's Trout. *Salmo gairdneri gilberti* Jordau, Thirteenth Biennial Rept. Fish. Comm. Calif., 1894, 143 and pl. Kern R., Cal., U.S.A. (*vide* Jordan & Evermann, Bull. U.S. Nat. Mus., xlvii, Fish. N. & Mid. Amer., i., 1896, 501 and 502).

Mr. Walter Hannam brought a specimen of a supposed spent male Rainbow Trout or a hybrid, with another of *Salmo irideus*, to the Australian Museum for identification. Both had been caught by Dr. H. O. Lethbridge below the Blue Water Hole, above the falls at the head of the Goodradigbee River, New South Wales, early in November, 1928. I determined the novelty as *Salmo gilberti* Jordan, though it lacked white tips to the anal and ventral fins, so this species must be added to the list of fishes which have been introduced into Australia. *Salmo gilberti* is common throughout the North Island of New Zealand, according to Phillipps and Hodgkinson (N.Z. Journ. Sci. Tech., v., 1922), and it seems feasible that its eggs may have been introduced into New South Wales from New Zealand mixed with those of *S. irideus*, the Rainbow Trout. A detailed account of the American *Salmo gilberti* has been given by Evermann (Bull. U.S. Bur. Fish., xxv., 1905, published May, 1906, 18, pl. xv., coloured; Juday, *ibid.*, 47 records the food of this Trout).

XLII.

Family CYPRINIDAE.

386. CYPRINUS Linnaeus, Syst. Nat., ed. 10, 1758, 320. Logotype, *C. carpio* Linnaeus, designated by Guichenot, Dict. pitt. d'Hist. Nat., ii., 1835, p. 8.
- 386a. CYPRINUS CARPIO. Carp., *Id.*, Linnaeus, Syst. Nat., ed. 10, 1758, 320; *ibid.*, ed. 12, 1766, 525. Based on Artedi, Faun. Svec., and Gronow. "Habitat in Europa."

The Carp has been introduced into New South Wales and lives in large numbers in Prospect Reservoir, inland from Sydney, where it is known as "Prussian Carp" and sometimes "Crucian Carp." A specimen which died in captivity in Taronga Park Aquarium, Sydney, was presented to the Australian Museum (regd. No. 1A.3660), and is the subject of this record. This species was not included in the Check-list, but Anderson (Austr. Mus. Magazine, iii., 1927, 87) states that the "Crucian Carp" was introduced in 1888. The Carp is common in Thermal Lakes and ponds throughout New Zealand (*vide* Phillipps, Jour. Pan-Pacif. Res. Inst., ii., 1, 1927, published December, 1926, 15).

Macleay stated that a species of *Carpiodes* was introduced into New South Wales and McCulloch noted this in his Check-list, but the identification was probably incorrect and may have referred to *Cyprinus carpio*. Thanks to the kindness of Dr. E. W. Gudger, Bibliographer and Associate of the American Museum of Natural History, I am able to reproduce here a transcription of an anonymous article, credited to F. H. Bean, in Dean's "Bibliography of Fishes," which appeared in "Forest and Stream," xxxii, January 24, 1889, p. 10.

Introduction of a Supposed Carp Sucker into New South Wales.

"At the meeting of the Linnean Society of New South Wales at Sydney, October 30, 1888, Mr. Macleay exhibited four specimens of a species of carp sucker, which had been taken from a nearly dry water-hole close to the Wingecaribee River, at Elvo, Burradoo, a few days before. Several hundred of these fishes were removed from the holes and placed in the river in the immediate vicinity. Mr. Macleay finds the sucker to belong to the genus *Carpiodes*, which includes several species, all of them presumably limited to fresh waters of the United States, and concludes by saying that 'it would be interesting to know how

and when the fish was introduced into this country, where its acclimatisation, as far as Wingecaribee is concerned, seems to have been so perfectly successful.' If the carp sucker has gone to New South Wales from the United States, it may have been carried unintentionally along with carp or bass, associated species in some Eastern waters of our country. We hope, however, that this inferior fish, which has nothing to recommend it but its pleasing form and colors, may not eventually be charged against us. We have failed to find any record of a shipment of carp from the United States Government ponds to Australia."

XLVI.

Family ANGUILLIDAE.

77a. *ANGUILLA AUSTRALIS* Richardson.

Since the appearance of the second edition of the Check-list, Schmidt has revised the Australian species of *Anguilla* and has named from Eastern Australia a new form, *Anguilla australis occidentalis* (Trans. N.Z. Inst., lviii., 4, March 19, 1928, 388, and Rec. Austr. Mus., xvi., 4, March 28, 1928, pp. 181, 198-9, and 203, figs. 2-8 and 9d-f). In accordance with the rules of zoological nomenclature, however, *Anguilla australis occidentalis* Schmidt should be called *Anguilla australis australis* Richardson, whilst *A. australis orientalis* Schmidt, named from New Zealand in the same papers, should apparently be called *Anguilla australis schmidtii* Phillipps (N.Z. Journ. Sci. Tech., viii., 1, 1925, 29-30, fig. 4).

LV.

Family SYNGNATHIDAE.

387. *RUNCINATUS*, gen. nov.

Differs from *Solegnathus* Swainson in having the dorsal ridges of trunk and tail continuous; the mediolateral ridges expand below the dorsal fin (at least in males) and terminate on the sides of the tail. Orthotype, *Solegnathus dunckeri* Whitley.

387a. *RUNCINATUS DUNCKERI*. Spiny Sea Horse. *Solegnathus dunckeri* Whitley, Rec. Austr. Mus., xv., 5, April 6, 1927, 293-295, pl. xxiv., fig. 1. Lord Howe Island. Type in Austr. Museum.

I recently received a specimen from Grafton, New South Wales, so this species is Australian and must be added to the Check-list. It had previously been doubtfully reported from New South Wales.

XXIV.

Family ATHERINIDAE.

148b. *MELANOTAENIA NEGLECTA* Rendahl., Medd. Zool. Mus. Kristiania, No. 5, 1922, 179 and 181. Cudgegong River at Ryleston, N.S.W. Types in Zoological Museum, Oslo.

A species nominally distinct from the northern Freshwater Sunfish, *M. nigrans* (Richardson).

CXXX.

Family CALLIONYMIDAE.

285e. *CALLIONYMUS MACDONALDI* Ogilby, Ann. Q'ld. Mus., x., November 1, 1911, 56, pl. vi., fig. 2. Moreton Bay. Type in Queensland Museum. *Id.* McCulloch, Biol. Res. Endeavour, v., 4, 1926, 205, pl. liv., fig. 1 (holotype).

Mr. T. C. Roughley has presented to the Australian Museum a specimen from the Manning River, at Tarce, which was collected on October 18, 1928, by Dr. S. M. Ware. Regd. No. 1A.3656. Recorded by me in Abstr. Proc. Linn. Soc. N.S.W., 421, November, 1928, third page.

CXL.

Family GOBIIDAE.

388. *GUNNAMATTA* Whitley, Rec. Austr. Mus., xvi., 4, March 28, 1928, 225. Orthotype, *G. insolita* Whitley.

- 388a. *GUNNAMATTA INSOLITA* Whitley, *loc. cit.*, 225, pl. xvi., fig. 3. Gunnamatta Bay, Port Hacking. Type in Austr. Museum.

Only known from the type and a specimen recently collected by the writer in the lagoon at Narrabeen, north of Sydney.

CXLI.

Family BLENNIIDAE.

389. *CLINUS* Cuvier, *Regn. Anim.*, ed. 1, ii., "1817" = December, 1816, p. 251. Logotype, *Blennius superciliosus* Linnaeus, designated by Jordan, *Gen. Fish.*, i., 1917, 101.

Note.—Swainson (*Nat. Hist. Classif. Fish. Amphib. Rept.*, ii., July, 1839, p. 75) designated *Clinus acuminatus* Cuv. & Val., as type of this genus, but that species was not mentioned by Cuvier in 1816.

- 389a. *CLINUS PERSPICILLATUS* Cuv. & Val., *Hist. Nat. Poiss.*, xi., July, 1836, 372. Westernport, Victoria. *Id.* McCulloch, *Rec. Austr. Mus.*, vii., 1, 1908, 43, pl. xi., fig. 4.

Mr. William Driscoll found a specimen of this southern species in a rock-pool at Bermagui in September, 1927. New record for New South Wales. *Regd. No.* 1A.3642.

CLIV.

Family ANTENNARIIDAE.

390. *TRICHOPHYRYNE* McCulloch & Waite, *Rec. S. Austr. Mus.*, i., 1, May 24, 1918, 66 and 68. Orthotype, *Antennarius mitchelli* Morton.

- 390a. *TRICHOPHYRYNE MITCHELLI* Prickly Angler Fish. *Antennarius mitchelli* Morton, *Proc. Roy. Soc. Tasm.*, 1896 (1897), pp. xiv. and 98. East Tasmania [= Lisdillon]. Type in Tasmanian Museum, Hobart. *Trichophryne mitchellii* McCulloch & Waite, *Rec. S. Austr. Mus.*, i., 1918, 68, pl. vi., fig. 1. (South Australian specimen).

One specimen was recently trawled off the southern coasts of New South Wales. *Austr. Mus.*, *Regd. No.* 1A.3614. New record for the State. Only grows to about $4\frac{1}{2}$ inches long.

CLVa.

Family CHAUNACIDAE.

391. *CHAUNAX* Lowe, *Proc. Zool. Soc. Lond.*, xiv., November, 1846, p. 81. Haplotype, *C. pictus* Lowe.

- 391a. *CHAUNAX ENDEAVOURI*, sp. nov.

The specimen figured by McCulloch (*Biol. Res. Endeavour*, iii., 3, April 21, 1915, 165, pl. xxxiii., figs. 1-1a) is apparently distinct from the Japanese *Chaunax fimbriatus* Hilgendorf and may be named *Chaunax endeavouri*, the type locality being east of Flinders Island, Bass Strait; 70-100 fathoms.

Another specimen, trawled near Montague Island (*Austr. Mus.*, *Regd. No.* 1A.3591) shows that this species enters the New South Wales fauna.

CLX.

Family TETRAODONTIDAE.

392. *LIOSACCUS* Günther, *Cat. Fish. Brit. Mus.*, viii., 1870, 272 and 287. Logotype, *Tetrodon cutaneus* Günther, designated by Jordan, *Gen. Fish.*, iii., 1919, 357.

- 392a. *LIOSACCUS AEROBATICUS* Whitley, *Rec. Austr. Mus.*, xvi., 4, March 28, 1928, 237, pl. xvi., fig. 2. Trawled off Montague Island. Type in Austr. Museum.

A Toado whose spineless skin is minutely wrinkled and which is capable of expanding its body to an enormous extent. Length about eight inches.